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10/028,573	12/19/2001	Eric Klingler	10194.8032.US01	3290

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PERKINS COIE LLP/AWS
P.O. BOX 1247
SEATTLE, WA 98111-1247

EXAMINER

PYZOCHA, MICHAEL J

ART UNIT	PAPER NUMBER
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2137

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/028,573	Applicant(s) KLINGLER ET AL.	
	Examiner Michael Pyzocha	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 18-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 18-28 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-5, 18-28, and 30 are pending.
2. Response filed on 10/06/2005 has been received and considered.

Claim Rejections - 35 USC § 112

3. The rejections under the second paragraph of 35 U.S.C. 112 have been withdrawn based on the filed amendments.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek (US 5243653), further in view of Lynn (US 5345508) and further in view of Chien et al (US 20020165972).

As per claim 1, Malek discloses processing a message for transmission, wherein the message includes control data and

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payload data, and wherein the control data is not encrypted; determining whether the control data contains a particular control message; if the control data contains the particular control message, using the cryptosystem to encrypt the message for transmission; parsing the message for transmission to separate the control data from the payload data; determining whether the control data contains the particular control message; if the control data contains the particular control message (see Malek column 4 lines 47-57).

Malek fails to disclose initiating an encryption/decryption process and the counter.

However, Lynn teaches initiating an encryption/decryption system and the use of the counter (see column 2 lines 54-64 and column 5 line 40 through column 6 line 23).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Lynn's method for initiating an encryption/decryption process in Malek.

Motivation to do so would have been to provide self-synchronization (see Lynn column 2 lines 47-51).

The modified Malek and Lynn system fails to disclose the use of an encrypted airlink packet for transmission over an airlink.

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However, Chien teaches the use of an encrypted airlink packet (see paragraph 81).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the airlink packet of Chien in the modified Malek and Lynn system.

Motivation to do so would have been provide airlink filtering (see paragraph 65).

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn and Chien system as applied to claim 1 above, and further in view of Bender (US 6366779).

As per claim 2, the modified Malek, Lynn and Chien system fails to disclose the control message is a link control channel message.

However, Bender teaches such a message (see column 14 lines 38-62).

At the time of the invention it would have been obvious to a person of ordinary skill in the art for the modified Malek, Lynn and Chien system's control message to be a link control channel message.

Motivation to do so would have been to allow the base station to initiate a call (see column 14 lines 38-62).

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7. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn and Chien system as applied to claims above, and further in view of Schneier (Applied Cryptography).

As per claim 3, the modified Malek, Lynn and Chien system fails to disclose the use of a state box.

However, Schneier teaches such a state box (see pages 397-398).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Schneier's state box as the cryptosystem of the modified Malek, Lynn, and Chien system.

Motivation to do so would have been the simplicity of the algorithm (see page 398).

As per claim 4, the modified Malek, Lynn, Chien, and Schneier system discloses performing a mathematical operation on the key to alter the key for security, wherein the key is an array of data (see Lynn column 2 lines 54-64); and operating on a state box using the altered key, wherein the state box is an array of data (see Schneier pages 397-398).

As per claim 5, the modified Malek, Lynn, Chien, and Schneier system discloses a RC4 state box and key (see Schneier pages 397-398).

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8. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn, Chien, and Schneier system as applied to claims above, and further in view of Dent (US 5060266).

As per claims 18-19, the limitations are substantially the same as claim 1 with the addition of a state box, and are therefore taught as in claim 3, but fail to disclose the use of the ACC level.

However, Dent teaches the use of such level (see column 6 lines 43-60 and column 7 lines 12-31).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the processing of the modified Malek, Lynn, Chien, and Schneier system at the ACC level.

Motivation to do so would have been to provide a "blank and burst" mode of operation (see column 7 lines 12-31).

As per claim 20, the modified Malek, Lynn, Chien, Schneier, and Dent system discloses sending an encryption key (see Lynn column 2 lines 54-64).

As per claim 21, the modified Malek, Lynn, Chien, Schneier, and Dent system discloses changing the encryption key according to a predetermined algorithm (see Lynn column 2 lines 54-64).

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As per claim 23, the modified Malek, Lynn, Chien, Schneier, and Dent system discloses the method being performed each time the base station participates (see Malek column 4 lines 47-57).

As per claim 22, the modified Malek, Lynn, Chien, Schneier and Dent system discloses the method being performed at the associated control channel level (see Dent column 6 lines 43-60 and column 7 lines 12-31).

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn, Chien, Schneier, and Dent system as applied to claim 18 above, and further in view of Bender and NetBEUI (webpage).

As per claim 24, the modified Malek, Lynn, Chien, Schneier, and Dent system fails to disclose the particular control message is a link control channel ("LCC") message that is a "set asynchronous balance mode" ("SABM") message and a "set asynchronous balance mode unnumbered acknowledge" ("SABMUA") message.

However, Bender teaches the LCC message (see column 14 lines 38-62) and NetBEUI teaches the SABM message (see page 1).

At the time of the invention it would have been obvious to a person of ordinary skill in the art for the messages of the modified Malek, Lynn, Chien, Schneier, and Dent system to be those of Bender and NetBEUI.

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Motivation to do so would have been to allow the base station to initiate a call (see Bender column 14 lines 38-62) and to conform to the 802.2 protocol standard (see page 1).

10. Claims 25-27, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malek, further in view of Lynn and further in view of Dent (US 5060266).

As per claim 25, Malek discloses at least one digital signal processing means; at least one central processing means; and encryption synchronization means configured to detect a particular control message in a data transmission, wherein the particular control message is used according to a wireless communication protocol to provide at least one other control function under the wireless communication protocol and, in response, wherein the particular control message occurs just before the transmission of telephony data (see column 4 lines 47-57).

Malek fails to disclose initiating an encryption/decryption process.

However, Lynn teaches initiating an encryption/decryption system (see column 2 lines 54-64).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Lynn's method for initiating an encryption/decryption process in Malek.

Motivation to do so would have been to provide self-synchronization (see Lynn column 2 lines 47-51).

The modified Malek and Lynn system fails to disclose the method being performed at the associated control channel level.

However, Dent teaches the use of such level (see column 6 lines 43-60 and column 7 lines 12-31).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to perform the processing of the modified Malek and Lynn system at the ACC level.

Motivation to do so would have been to provide a "blank and burst" mode of operation (see column 7 lines 12-31).

As per claim 26, the modified Malek and Lynn system discloses the encryption synchronization means is further configured to provide a current encryption key to receiving devices and sending devices in the wireless communication network (see Lynn column 2 lines 47-51).

As per claim 27, the modified Malek, Lynn, and Dent system discloses the encryption synchronization means is further configured to count data blocks in a message being transmitted to determine when to begin encryption/decryption (see Lynn column 5 line 40 through column 6 line 23).

As per claim 30, the modified Malek, Lynn, and Dent system discloses the initiation of the encryption/decryption process

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occurs each time a wireless connection is set up, comprising initial connection, connection hand off, and connection reestablishment after unexpected connection loss (see Malek column 4 lines 47-57).

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Malek, Lynn, and Dent system as applied to claim 26 above, and further in view of Schneier (Applied Cryptography).

As per claim 28, the modified Malek, Lynn and Dent system fails to disclose the use of a state box.

However, Schneier teaches such a state box (see pages 397-398).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to use Schneier's state box as the cryptosystem of the modified Malek, Lynn, and Dent system.

Motivation to do so would have been the simplicity of the algorithm (see page 398).

Response to Arguments

12. Applicant's arguments filed 10/06/2005 have been fully considered but they are not persuasive. Applicant argues: that the combination of Malek and Lynn fails to teach detecting a

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particular control message, provide at least one other control function, and in response to (or "based on" as in claim 1) the control message to initiate the encryption and/or decryption process; that there is no motivation to combine Malek and Lynn; and the other references fail to make up the deficiencies of Malek and Lynn.

Regarding Applicant's argument that the combination of Malek and Lynn fails to teach detecting a particular control message, provide at least one other control function, and in response to (or "based on" as in claim 1) the control message to initiate the encryption and/or decryption process, the step of detecting must occur for the control part to be used in synchronization as in column 4 lines 53-54 of Malek. Also in column 4 lines 48-50 Malek discloses other functions the control part is used for. Finally, Malek teaches in response to (or based on) a particular control message synchronizing the encryption and decryption information in column 4 lines 53-55 because the synchronization will not occur until the synchronization part and the control part are present and therefore in response to both being present the synchronization and therefore initialization (as taught by Lynn) occur.

Regarding Applicant's argument that there is no motivation to combine Malek and Lynn, Applicant makes contradictory

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statements on page 11, in the second paragraph Applicant states, "Malek, however, is no directed towards a method of preventing the loss of synchronization between a transmitter and a receiver," and in the third paragraph, "Malek, therefore, describes synchronized encryption between a receiver and a transmitter." Malek and Lynn both relate to synchronizing encryption between a transmitter and a receiver and therefore the motivation taught by Lynn of self-synchronization is valid motivation to combine.

The argument with respect to the remaining references failing to make up for deficiencies of Malek and Lynn is moot in view of the above response.

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will

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expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pyzocha whose telephone number is (571) 272-3875. The examiner can normally be reached on 7:00am - 4:30pm first Fridays of the bi-week off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJP


EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER